Eğitim ve Bilim
2014, Cilt 39, Sayı 171

Education and Science
2014, Vol. 39, No 171

The Predictors of Academic Procrastination: Responsibility, Attributional Styles Regarding Success / Failure, and Beliefs in Academic Self-Efficacy

Akademik Ertelemenin Yordayıcıları: Sorumluluk, Başarı / Başarısızlığa Yönelik Yükleme Stilleri ve Akademik Özyeterlik İnançları

Mehmet KANDEMİR[1]
Kırıkkale University

Abstract

The present study aims to examine the extent to which personal traits, attributional styles and perceptions of academic self-efficacy among university students explain their academic procrastination behaviors. The study used a relational survey model; the sample group consisted of 330 students enrolled in the Faculty of Education and the Faculty of Sciences and Letters in Gazi University and Kırıkkale University. Research data were obtained using the "Aitken Academic Procrastination Scale," "Adjective Based Personality Test," "Causal Dimension Scale," and "Academic Self-Efficacy Scale". Path analysis modeling was used to test the hypothesis models. The results of the study indicated that academic procrastination behaviors of students are predictable through personal traits, attributional styles regarding success or failure, and perceptions academic self-efficacy.

Keywords: Academic Procrastination, Responsibility, Attributional Styles, Academic Self-efficacy

Öz

Araştırmanın amacı, üniversite öğrencilerinin akademik erteleme davranışlarını kişilik özellikleri, yükleme stilleri ve akademik öz yeterlik inancının ne düzeyde açıkladığını bir model çerçevesinde incelemektir. İlişkisel tarama desenin kullanıldığı araştırmada, araştırma grubunu, Gazi Üniversitesi ve Kırıkkale Üniversitesi'nin Eğitim ve Fen-Edebiyat Fakültesinde 330 öğrenci oluşturmuştur. Araştırma verilerinin toplanmasında, "Aitken Akademik Erteleme Ölçeği", "Beş Faktör Kişilik Ölçeği"; "Nedensel Boyutlar Ölçeği"; "Akademik Öz-yeterlik Ölçeği" kullanılmıştır. Araştırmada hipotez modellerinin test edilmesi amacıyla path analizi modellemesi tekniği kullanılmıştır. Araştırma sonucunda, öğrencilerin akademik erteleme davranışı, kişilik özellikleri, başarıya ya da başarısızlığa yönelik yükleme stilleri ve akademik özyeterlik inançlarıyla yordandığı belirlenmiştir.

Anahtar Kelimeler: Akademik Erteleme, Sorumluluk, Yükleme Stilleri, Akademik Özyeterlik

[1] Kırıkkale University, Faculty of Education, mkandemir61@gmail.com

Introduction

Procrastination is defined as an ineffective lifestyle which leads to failure in fulfilling commitments to predetermined goals, difficulty in negotiating priorities, and is notorious for being a source of sadness to those "last-minute" personalities who engage in it (Milgram, 1991). According to Roberts (1997), procrastination is marked by a preference to short-term benefits rather than long-term ones. This behavior is observed in every arena of life and individuals engaging in this behavior demonstrate inconsistencies between plans they make and their adherence to those plans. These individuals often abide by their plans at first, but fail to follow through with them. Consequently, they have to exert themselves more at the last minute. Among procrastinators, two typical attitudes or behaviors are demonstrated: avoiding the consequences of procrastination and over-exertion in order to compensate for the behavior (Farran, 2004). According to Farran, avoidance of the consequences of procrastination can manifest itself as blame towards someone or something. In order to maintain self-respect, individuals who deny responsibility for the situation try to justify themselves by blaming others for the consequences of their behavior. Farran also states that individuals engaging in procrastination exert excessive effort in order to compensate for it. As a result of the continuous delay of daily tasks in multiple domains of their lives, these individuals face an accumulation of tasks that must be completed in a short time-frame. As it follows, these individuals must overexert themselves in order to fulfill these tasks, and this contributes to the perpetuation of the aforementioned procrastination cycle. This cycle is an obstacle which individuals must to overcome in many aspects of their lives, not least of which is their educational life. Students habitually procrastinate by avoiding their academic responsibilities, such as studying, doing homework, and preparing for examinations. Rothblum, Solomon & Murakami (1986) define academic procrastination as the continuous or occasional delay of academic duties. Relevant literature includes studies exploring the negative results of academic procrastination, such as academic failure (Burka and Yuen, 1983; Ferrari, Driscoll & Diaz-Morales, 2007; Knaus, 1998), falling behind the class in more difficult courses (Rothblum, Solomon & Murakami, 1986), repeated absences in courses, truancy, and eventual withdrawal (Knaus, 1998). Academic procrastination in schools is observed in duties such as preparing for examinations, doing homework, and completing projects (Dryden, 2000; Milgram, Mey-Tal, & Levison, 1998; Roberts, 1997). Academic procrastination is considered to be more common problem than general procrastination among university students (Aydoğan, 2008; Balkıs, 2006; Clark & Hill, 1994; Ellis & Knaus, 1977; Ferrari, Johnson, & McCown., 1995). Academic procrastination is reported by Ellis & Knaus (1977) to be engaged in by 70% of university students and according to Hill et al., (1978) by 50% of university students half of their time or more. In addition, McCown & Roberts, (1994) reported that 19% of freshmen, 22% of sophomores, 27% of juniors, and 31% of seniors engage in academic procrastination. Onwuegbuzie (2004) conducted a study on 135 students and found that between 40% and 60% of students consistently engage in procrastination. The studies which aim to comprehend academic procrastination indicate the presence of a relationship between academic procrastination and many variables, including personal characteristics, self-efficacy beliefs, motivation, self-respect, anxiety, time management and attributional styles (Aydoğan, 2008; Balkıs, 2006; Howell & Watson, 2007; Kandemir, 2010; Pfeister, 2002). According to recent convention, personality studies are to be based upon five factors. Additionally, this structure is demonstrated to be one of the most important variables for explaining procrastination in relevant literature (Kandemir, 2010; Lay, Kovacs & Danto, 1998; McCown, Petzel & Rupert., 1987; Moon & İllingworth, 2005; Watson, 2001). Literature shows that the personality trait of responsibility is closely related to procrastination. Johnson and Bloom (1995) reported a negative relationship between an inclination towards procrastination and the demonstration of responsibility. Lee, Kelly, & Edwards (2006) examined the relationship between an inclination towards procrastination and the dimension of individual responsibility and found a significant positive relationship between the two. In addition, Kandemir (2010) and Özer (2012) determined that the presence of a responsible personality negatively influenced the occurrence of

academic procrastination. These findings support the assumption that and inclination toward procrastination is affected by an individual's level of responsibility.

Another variable which is related to the occurrence of academic procrastination is the attributional style of individuals regarding success or failure (Akbay & Gizir, 2010; Beck, Koons, & Milgrim, 2000; Gargari, Sabouri &Norzad, 2001). According to Weiner (2000), all people have the natural desire to have an explanation for their own or other people's behaviors. They will perceive a more consistent and balanced world – one which is more controllable (Piri & Kabakçı, 2007: 199). According to Weiner, people may attribute meaning to their success or failure in relation to three dimensions: locus, stability and control. Locus refers to attribution to internal or external sources of causality. Stability refers to attribution to the sustainability of causality. Control refers to attribution to the control of people on causality (Yapıcı & Yapıcı, 2010). According to Koçyiğit (2011), people make certain explanations or judgments while trying to understand the reasons behind their success or failure, and it is in these explanations in which they will make attributions. The dimensions and directions of attributions affect the feelings, beliefs and self-respect of individuals. The relevant literature includes studies discussing the effect of causal attributions regarding success or failure in fulfilling academic duties without delay (Akbay & Gizir, 2010; Beck, Koons, & Milgrim, 2000; Gargari, Sabouri & Norzad, 2011). According to Rothblum, Solomon & Murakami (1986), students who engage in more academic procrastination tend to attribute their success or failure on external and unstable factors. In a study conducted on university students, Akbay & Gizir (2010) found attributional styles were predictive variable of academic procrastination. In the another study, (Gargari, Sabouri & Norzad, 2011) has been reported that when students perceive success as controllable, the incidence of academic procrastination decreases. However, when failure is perceived as stable in relation to external factors, the incidence of academic procrastination increases. Given these findings, students' patterns of attribution regarding their success or failure are an important variable in explaining the occurrence of academic procrastination.

Another important variable thought to be related to academic procrastination is the belief in self-efficacy, which is defined as the reference of individuals to their personal judgment regarding the ability to organize and understand the behavior required to attaining performance goals (Bandura, 1986). The self-efficacy belief contributes to success in many ways because of its different dimensions. One of the dimensions is that of academic self-efficacy, which can contribute to an individual's success in academic life. To my best knowledge existing literature includes a few published studies examining the relationship between procrastination and beliefs regarding self-efficacy and academic self-efficacy (Farran, 2004; Klassen, Krawchuk & Rajani, 2007; Pfister, 2002, Sirios, 2004). The studies of Klassen, Krawchuk & Rajani (2007), Pfister (2002), Sirios (2004) and many other researchers regarding procrastination and academic procrastination found significant negative relationships between procrastination and self-efficacy beliefs. In conclusion, academic self-efficacy is the perception of individuals regarding their skills and qualities that direct their efforts to attain success. Given the aforementioned evaluations, it is clear that academic procrastination is an important variable that may affect students' successes in their academic lives. Students that need to fulfill academic responsibilities, such as preparing for examinations or doing homework and projects may fail to meet their potential due to academic procrastination. Given this context, there is a need to examine the causes of academic procrastination and to find ways for students to overcome it. The present study uses a model test in order to examine whether or not personal characteristics, attributional styles, and academic self-efficacy beliefs, all of which have been found to be related to academic procrastination, are the explanatory variables for the aforementioned behavior. The research process, methods used, and research findings in the present study may contribute to future studies on this subject and to literature regarding procrastination.

Method

A relational survey method was used in this research, which explains academic procrastination encountered in academic life through the five factors personality traits, styles of attribution regarding success or failure, and academic self-efficacy. This method aims to determine the presence and degree of covariance between two or more variables (Karasar, 2005). Academic procrastination was examined within the context of its relationships with personality, attributional styles and academic self-efficacy in the current study. The research group consisted of 330 students (152 male and 178 female) from the Faculty of Education and the Faculty of Sciences and Letters in Gazi University and Kırıkkale University. The grades of students in the research group are different. Of the students in the study group; 80 's first class, 92 second class, and 76 third grade and 82 fourth grade students. The research group recently at the university is composed of students who had entered the midterm exam.

Measures

Aitken Academic Procrastination Scale (AAPS): The scale developed by Aitken (1982) was adapted to Turkish by Balkıs (2007). The scale has one dimension and consists of a total of 16 items in 5 likert types. The 293 students from different departments were assessed on the validity studies of the adaptation of the scale by Balkıs (2007). Each item in the scale was examined for its measurement of inclination towards academic procrastination, and the item-total correlation was found to range between .33 and .73. The internal consistency coefficient of the scale is Cronbach Alfa (α) = .89. The Pearson correlation coefficient was found to be significant at r = .87, p<.001 level in the analysis conducted for test-retest reliability. A factor analysis was conducted in order to examine the structural validity of the scale and it was found that the scale had a one factor structure. The variance explained by the one factor is 38% and the eigenvalue of this factor is 6.14.

Adjective Based Personality Test (ABPT): The scale, developed by Bacanlı, İlhan **&** Arslan (2007), incorporates the personality features of emotional stability, extraversion, openness to experiences, agreeableness, and responsibility, which are the same considered in the five-factor personality theory. A factor analysis examining the structural validity of the scale found 40 adjective pairs, which can measure the features of the five-factor personality scale and whose factor load ranged between .37 and .86. Obtained dimensions were found to explain 52.6% of the variance of the five-factor personality scale. Sociotropy, Conflict Resolution, Positive and Negative Affect Shedule Scales (PANAS), and State Anxiety Inventories were used in order to test the concurrent validity of the ABPT. Expected results were derived from the comparisons and the scale was found to be valid. For reliability studies, internal consistency coefficients of each dimension were examined (.78-.84). Retests of the scale were performed at two week intervals and the correlation coefficients between features were found to range between .71 and .86. The responsibility feature was used in the present study regarding academic procrastination.

Causal Dimensions Scale II (CDSII): The scale, developed by Russell (1982) and revised by McAuley, Duncan & Russell (1992), was adapted to the Turkish language by Koçyiğit (2011). The scale has 12 items in 4 sub-dimensions: causality locus (1^{st} -6^{th} -9^{th} items), external control (5^{th} -8^{th} -12^{th} items), stability (3^{rd} -7^{th} -11^{th} items), and personal control (2^{nd} -4^{th} -10^{th} items). Factor analysis on the adapted version of the scale used in this study resulted in significant KMO values of .82, and Bartlett's sphericity test value of .00. The attributions regarding failure determined four factors whose loads ranged between .60 and .82. The factor structure of the scale was found as suggested in its original. The KMO value was .81 and the significance value after Bartlett's sphericity test is .00. This research found the reliability of sub-dimensions to be .56- .77 in attributions regarding success and .65- .77 in attributions regarding failure.

Academic Self-Efficacy Scale(ASES): This scale, developed by Kandemir & Özbay (2012), aims to determine the academic self-efficacy levels of students. Reliability and validity studies of the scale

included 468 students (243 female and 225 male) with different grades and different demographical features. Primarily, factor analysis was applied on data obtained from the research group. Confirmatory Factor Analysis was conducted in order to evaluate the four-factor structure of the Academic Self-Efficacy Scale (ASES), which was formed after Exploratory Factor Analysis (EFA). CFA results evaluated adaptive values of ASES, which were: X^2 = 513.04 (sd=148, p<.001), (χ^2 /sd) =3.47, GFI=.90, RMSEA=.073, RMR=.04, standardized RMR=.056, CFI=.97 and AGFI= .87. In addition to CFA, Croncbach alpha internal consistency coefficients, calculated based on item analyses, were examined in order to evaluate the reliability of the scores obtained from ASES. The coefficients were found to be .90 for the first factor, .78 for the second factor, .77 for the third factor, .69 for the fourth factor, and .91 for total scale. Item-total correlations for both dimensions ranged between .36 and .67.

Findings

This section includes information about the results of a model test explaining the academic procrastination of students. A model test of the research was conducted through path analysis. The research tested two main hypotheses. In the first model, the attributions regarding the courses in which students excelled in are included in the model as a mediator of responsibility and academic self-efficacy beliefs in predicting academic procrastination. In the second model, the attributions regarding the courses in which students failed are included in the model as a mediator of responsibility and academic self-efficacy beliefs in predicting academic procrastination. A Sobel test was used to examine the significance of indirect relations. The hypothesis model is as follows:

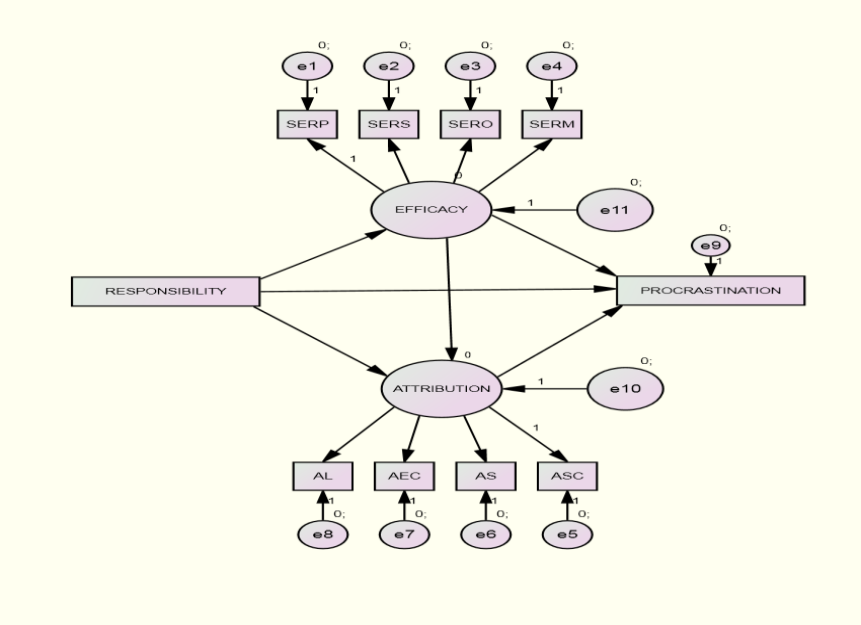

Figure 1. The Hypothesis model

In the hypothesis model, responsibility personality trait, beliefs in academic self-efficacy, and attributional styles regarding success or failure are thought to directly affect procrastination behavior. Responsibility is also thought to indirectly affect academic procrastination behavior via academic self-efficacy beliefs and attributional styles regarding success or failure. In addition, academic self-efficacy beliefs are also thought to indirectly affect academic procrastination behavior via attributional styles regarding success or failure. The two models test was conducted in this respect. Before conducting the First Path model test, correlation sufficiency between related variables was examined.

Table 1
Correlation Values Between Variables

Variables	1	2	3	4	5	6	7	8	9	10
PROCRASTINATION (1)	1									
RESPONSIBILITY (2)	-.31**	1								
SERO (3)	.14*	.24**	1							
SERS (4)	.13*	.19**	.58**	1						
SERP (5)	-.29**	.45**	.51**	.40**	1					
SERM (6)	.23**	.28**	.57**	.46**	.45**	1				
AL (7)	-.14*	.17**	.18**	.13*	.10	.13*	1			
AEC8)	.13*	-.07	-.10	-.10	.20**	-.04	-.25**	1		
AS (9)	.12*	.11	.19**	.16**	.12*	.16*	.43**	-.10	1	
ASC(10)	-.15*	.11	.12*	.10	.09	.10	.69**	-.21**	.31**	1
TOTAL	330	330	330	330	330	330	330	330	330	330

*p<.05, ** p<.01

SERO: Self-efficacy regarding overcoming; *SERS:* Self-efficacy regarding striving; *SERP*: Self-efficacy regarding planning; *SERM:* Self-efficacy regarding method; *AL:* Attributional Locus; *AEC:* Attributional External Control; *AS*: Attributional Stability; *ASC:* Attributional Self-Control

The results of the correlation analysis determined significant relationships between academic procrastination and the related variables. The relation coefficients of academic procrastination with related variables are as follows: r=-.31, p<01 with the responsibility personality trait, r=.14, p<05 with self-efficacy beliefs regarding overcoming academic problems, r=.13, p<05 with self-efficacy beliefs regarding striving, r=-.29, p<01 with self-efficacy beliefs regarding academic planning, r=.23, p<01 with self-efficacy beliefs regarding academic methods, r=-.14, p<05 with attributional style regarding explaining success through locus, r=.13, p<05 with attributional style regarding explaining success through external control, r=.12, p<05 with attributional style regarding explaining success through stability and r=-.15, p<05 with attributional style regarding explaining success through self-control. The relationships are found to be significant. The correlation values obtained from the research results are found to be sufficient for model test. After finding relational coefficients between research variables, a model test aimed at explaining academic procrastination behavior was conducted. The analysis results regarding first model tests are as follows:

In examining the coefficient of concordance regarding the tested model, CFI was found to be .92; IFI was found to be .93; NFI was found to be .91; TLI was found to be .90, and RFI was found to be .89. Chi-Square was found to be 3,75 and RMSEA was determined as .07. That the coefficients of concordance, like CFI, IFI, NFI, and TLI, were over .90, Chi-Square was below 5, and RMSEA value was below .08, indicates that the model used is a good one (Şimşek, 2007).

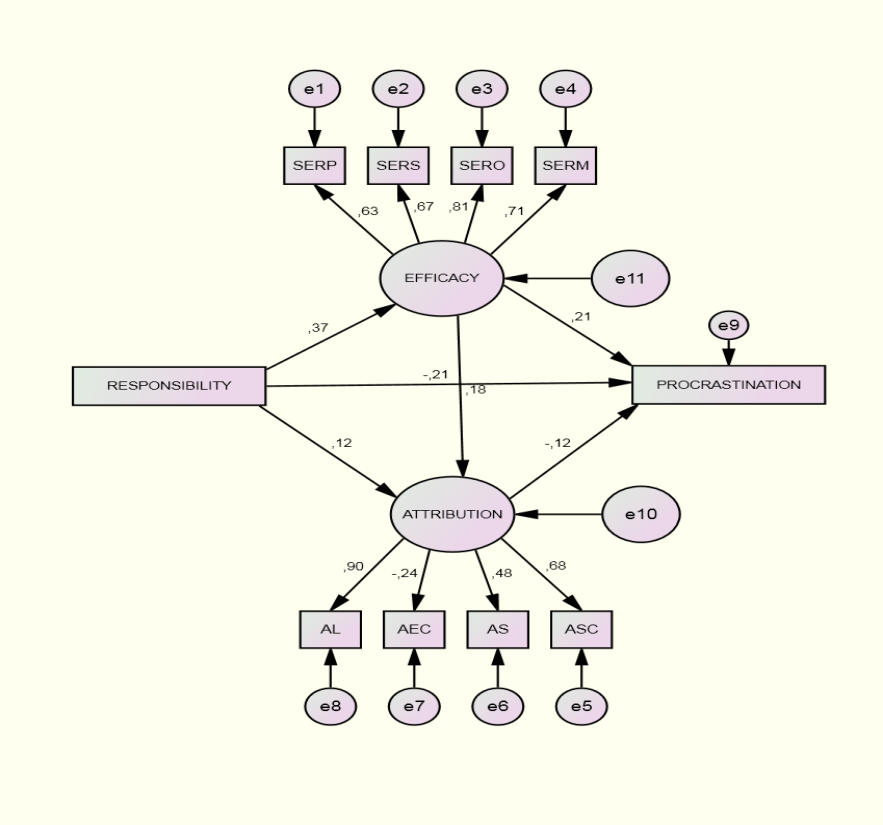

Figure 2. Path diagram regarding final model

Findings Regarding Direct Effects

As it can be seen in the final model explaining academic procrastination behavior in Figure 2, responsibility (β= -.21; t=3.47); attributional styles (β=-.12; t=-1.94) and belief in academic self-efficacy (β=.21; t=-3.06) directly predict academic procrastination. Responsibility is found to significantly and negatively predict academic procrastination behavior. Within this context, students with high responsibility can be said to exhibit behaviors of academic procrastination at lower rates. Academic self-efficacy beliefs positively and significantly predict academic procrastination. Individuals with high self-efficacy beliefs can be said to exhibit behaviors of academic procrastination at higher rates. Attributional styles of students negatively affect academic procrastination. It can be concluded that students reduce behaviors of academic procrastination when they attribute success to internal sources. In addition, responsibility observed to directly predict attributional styles (β= .12; t=2.01) and academic self-efficacy beliefs (β= .37; t=4.48); and academic self efficacy beliefs are observed to directly predict attributional styles (β= .18; t=2.48).

Findings regarding Indirect Effects

The research results determined that .077 of the relationship between responbsibility and academic procrastination (.37*.21) resulted from the indirect effect of academic self-efficacy (t_{sobel}=2.07. P=.05). This result indicates the contribution of academic self-efficacy at significant levels as a mediatory variable to the model. In other words, responsibility predicts academic procrastination via belief in academic self-efficacy. In addition, .0144 of the relationship between responsibility trait and academic procrastination (.12*-.12) is found to be the result of the effect of attributional styles regarding success (t_{sobel}=2.35. P=.05). In other words, responsibility also predicts academic procrastination via attributional styles regarding success. Moreover, -.022 of the relationship between self-efficacy beliefs of students and academic procrastination (.18*-.12) is found to be the result of the effect of attributional styles regarding success (t_{sobel}=2.30. P=.05).

In the second hypothesis test, the attributions of the students regarding the courses they failed were included in the model and their attributions regarding the courses in which they succeeded were excluded. Before process, the correlation efficacy between variables was examined.

Table 2
Correlation Values Between Variables

Variables	1	2	3	4	5	6	7	8	9	10
PROCRASTINATION (1)	1									
RESPONSIBILITY (2)	-.31**	1								
SERO (3)	.14*	.24**	1							
SERS (4)	.13*	.19**	.58**	1						
SERP (5)	-.29**	.45**	.51**	.40**	1					
SERM (6)	.23**	.28**	.57**	.46**	.45**	1				
AL (7)	-.12*	.12*	-.10*	.11*	.14*	-.12*	1			
AEC8)	.12*	-.11*	-.12*	-.12*	-.14*	-.13*	-.23**	1		
AS (9)	-.13*	-.12*	.13*	-.13*	-.13*	-.12*	.16**	.18**	1	
ASC(10)	-.14*	.10	.12*	.12*	.11*	-.11*	.68**	-.22**	.11*	1
TOTAL	330	330	330	330	330	330	330	330	330	330

*p<.05, ** p<.01

SERO: Self-efficacy regarding overcoming; *SERS:* Self-efficacy regarding striving; *SERP:* Self-efficacy regarding planning; *SERM:* Self-efficacy regarding method; *AL:* Attributional Locus; *AEC:* Attributional External Control; *AS:* Attributional Stability; *ASC:* Attributional Self-Control

After examining mutual and partial correlations between exploratory variables and academic procrastination, significant relationships were found between academic procrastination and attributional styles regarding failure. However, these relationships were observed at low levels. The relational coefficients of academic procrastination with the variables related with attributional styles regarding failure are as follows: r=--.12, p<05 with explaining failure through locus, r=.12, p<05 with explaining failure through external control, r=-.14, p<05 with explaining failure through stability and r=-.14, p<05 with explaining failure through self-control. These relationships are significant. The correlation values obtained from research results indicated the efficacy of the model test. After finding relational coefficients between research variables, a second model test aimed at explaining academic procrastination was conducted. Analysis results regarding the second model test are as follows:

Examining the coefficient of concordance regarding the tested model, CFI was found to be .91; IFI was found to be .92; NFI was found to be .91; TLI was found to be .90, and RFI was found to be .88. Chi-Square was found to be 4.10 and RMSEA was determined as .08. That the coefficients of concordance, like CFI, IFI, NFI, and TLI, were .90 and over, Chi-Square was below 5, and the RMSEA value was below .08, indicates that the model used is a good one (Şimşek, 2007). Therefore, the examination of improvement indexes was not needed.

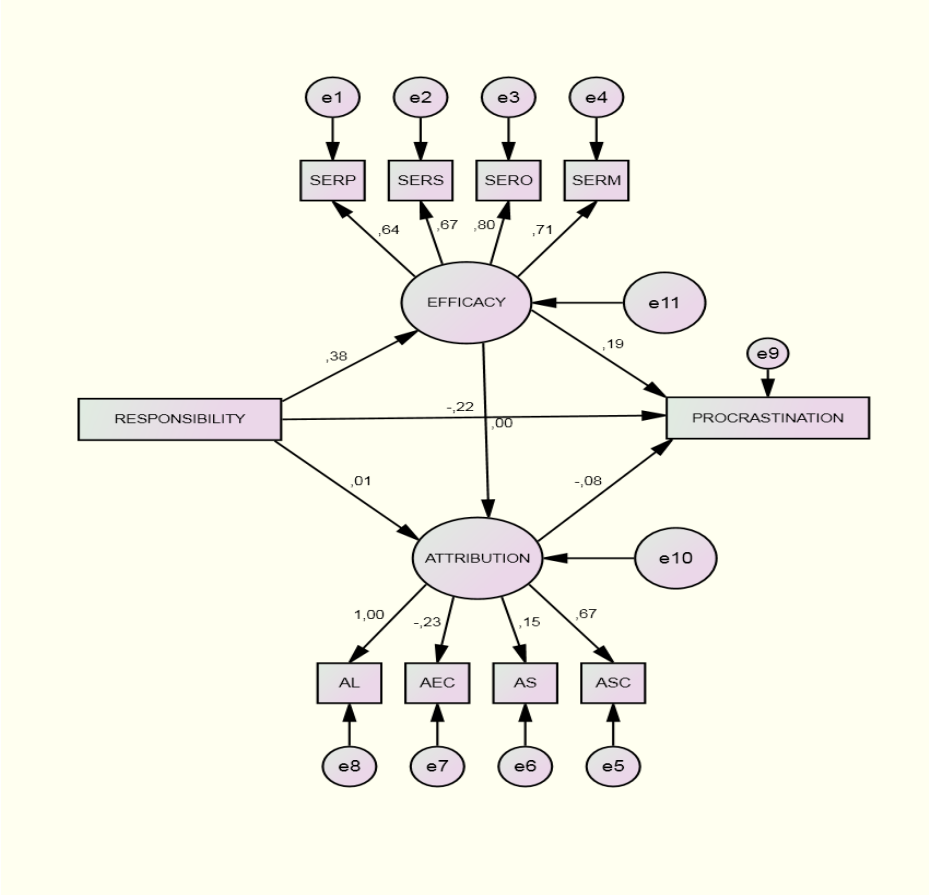

Figure 3. Path diagram regarding final model

Findings Regarding Direct Effects

As it can be seen in the final model explaining academic procrastination behavior in Figure 4, responsibility (β= -.22; t=-3.87); and belief in academic self-efficacy (β=.19; t=1.92) directly predict academic procrastination, however attributional styles regarding failure (β=-.08; t=-1.41) do not predict academic procrastination. Responsibility is observed to significantly and negatively predict academic procrastination behavior. Within this context, students with high responsibility can be said to perform academic procrastination behavior at lower rates. Academic self-efficacy beliefs positively and significantly predict academic procrastination behavior. Individuals with high self-efficacy beliefs can be said to exhibit behaviors of academic procrastination at higher rates. The attributional styles of students regarding the courses they failed negatively but insignificantly affect academic procrastination. The meaning students attributed their failure is shown to reduce academic procrastination, however this result is observed at low rates. In addition, responsibility is observed to directly predict attributional styles (β= .01; t=1.68) and academic self-efficacy beliefs (β= .38; t=5.08); and academic self efficacy beliefs are observed to directly predict attributional styles (β= .00; t=-0.17). Given the results of this model test, responsibility, belief in academic self-efficacy, and attributional styles regarding failure can be counted among the causes behind academic procrastination.

Findings Regarding Indirect Effects

The results of the second model test determined that .070 of the relationship between responsibility and academic procrastination (.37*.21) resulted from the indirect effect of academic self-efficacy (t_{sobel}=2.18. P=.05). This result indicates the contribution of academic self-efficacy to the model at a significant level as a mediatory variable. In other words, responsibility predicts academic procrastination via belief in academic self-efficacy. In addition, .0008 of the relationship between responsibility and academic procrastination (.01*-.08) is found to be the result of the effect of

attributional styles regarding failure (t_{sobel}=0.90. P=.37). In other words, responsibility also predicts academic procrastination via attributional styles regarding success. Moreover, attributional styles of students regarding failure had no contribution to belief in academic self-efficacy in predicting academic procrastination (t_{sobel}=0.70. P=.41). Within this context, the attributional styles of students regarding failure do not intermediate responsibility and academic self-efficacy beliefs in predicting academic procrastination.

Discussion

The results of the model test aiming to explain academic procrastination indicated that the personality trait of responsibility, beliefs of academic self-efficacy, and attributional styles affect academic procrastination. It can be said that responsibility, academic self-efficacy beliefs, and attributional styles regarding success explain procrastination in the same model through direct and indirect relationships. According to this, responsibility is an important predictor of academic procrastination. This finding of the study is consistent with foreign (Lay, Kovacs & Danto, 1998; Lee et al., 2006; Johnson & Bloom, 1995; Moon & İllingworth, 2005; Watson, 2001) and domestic literature (Kağan et al., 2010; Kandemir, 2010; Özer & Altun, 2011; Özer, 2012). Johnson & Bloom (1995) stated in their study that procrastination has a negative relationship with responsibility. Lee et al. (2006) examined the subject and found a strong relationship between the inclination towards procrastination and responsibility. Moreover, Kağan et al. (2010) examined the behaviors of academic procrastination among university students in terms of personal characteristics and concluded that responsibility is an important predicting variable. Özer & Altun (2011) found that responsibility was among the causes of academic procrastination. According to Özer & Altun (2011), responsibility is related with personal characteristics, such as self-discipline, the desire to strive for success, tidiness, punctuality, task perception, determination, and organizational skills. Responsibility shows the extent of control, determination, and discipline of individuals (Arthur & Graziano, 1996). Overcoming academic tasks such as doing homework and preparing for examinations requires a student to be controlled, disciplined, self-controlled, to exert effort, to have organizational skills, and to be determined. Students may need more than just responsibility, especially when academic duties are more demanding. Students may increase their likelihood of procrastination if their perception of their duties is low upon encountering academic tasks and problems, and if they fail to make a program and stick to it with determination, they. However, students with determination in this respect, and a high level of perception of their duties, may demonstrate reduced procrastination. At the same time, the study results found that attributional styles regarding failure have no mediatory role for responsibility in predicting academic procrastination. Literature does not include any study supporting this finding. In the event of failure, students are found to explain themselves through external locus reasons (Gargari, Sabouri & Norzad, 2011). According to this, students who blame their failure on external reasons fail to engage an internal feature responsibility. In addition, responsibility is observed to positively and significantly predict academic self-efficacy beliefs and attributional styles regarding success. Kandemir (2010) found that responsibility positively influences self-efficacy beliefs of individuals in an academic field. Possession of internal discipline and determination may increase the self-esteem of students an academic arena.

The results of the study revealed that academic self-efficacy beliefs of students positively and significantly (however at slight rate), predict and inclination towards academic procrastination. According to the findings of the study, an increase in academic self-efficacy beliefs results in an increase in the occurrence of academic procrastination behaviors in students. Literature has few studies supporting this finding of the present study. Aydoğan & Özbay (2011) found a positive and insignificant relationship between academic self-efficacy beliefs and procrastination. Haycock, McCarthy, & Skay (1998) determined in their study that a high level of belief in self-efficacy positively and significantly (.31) predicted academic procrastination. Unrealistically trusting academic behaviors may result in the perception that all problems, like completing homework, can easily be completed.

This situation may cause students to act at the last minute. In addition, the academic self-efficacy belief scale that was used in the present study is directly intended at the following academic behaviors: "planning", "effort", "overcoming" and "method". In this respect, students may not want to negatively link their study habits to procrastination. A close relationship is observed between correlation values between "self-efficacy dimension regarding method" of the scale used in the present study and academic procrastination behavior. Given this relationship, students may regard academic procrastination as a strategy for studying. They may have succeeded in past lessons by studying at the last minute. In this respect, they may judge procrastination as a valid method for studying. In addition, a negative relationship was found between self-efficacy beliefs regarding planning and academic procrastination. The present study found that responsibility predicts academic procrastination via belief in academic self-efficacy. Relevant literature contains studies consistent with this result (Kandemir, 2010). Kandemir (2010) reports that academic belief in self-efficacy has a mediatory role for responsibility in predicting academic procrastination. A strong relationship was found between "belief regarding planning" and responsibility. This is a mutual relationship. In this respect, the mutual effect of belief in academic self-efficacy regarding responsibility and planning may negatively affect academic procrastination. In addition, students may not decrease their self-respect by evaluating themselves as insufficient. Therefore, in order to protect the self-respect of students performing procrastination, they may have maintain their beliefs in academic self-efficacy.

Another finding of the study is that the attributions of students regarding the courses in which they succeeded negatively and significantly predict academic procrastination. According to the present research, procrastination decreases when students relate success with internal or external locus and stability, and procrastination increases when students relate success with external control. This result is consistent with related literature (Beck, Koons, & Milgrim, 2000; Carden et al., 2004; Gargari, Sabouri & Norzad, 2011). Gargari, Sabouri & Norzad (2011) examined the relationship between the attributions of students regarding the courses in which they succeeded and academic procrastination. Their study results indicated that procrastination decreases when success is related with control locus, stability and is viewed as controllable, and that procrastination behavior increases when success is related with external factors. Carden et al.(2004) obtained similar results in their study. According to Carden et al. (2004), students who have achieved success insist on crediting internal sources. The study found that belief in academic self-efficacy predicted attributions regarding success. According to Janssen and Carton (1999), internal control sources receive more demand. Within this respect, a high level of belief in academic self-efficacy (overcoming, striving, planning, and method) may increase the level of internally sourced attributions. In other words, internally sourced attributions, together with responsibility and belief in self-efficacy, may cause students to relate success completely with themselves. Students who judge themselves to sufficient and see their own qualities as the source of their success may show decreased academic procrastination in order to attain success.

Another result of the study is that the attributional styles of the students regarding the courses they failed negatively, though insignificantly, predict academic procrastination. Gargari, Sabouri & Norzad (2011) reported that the meaning students attributed to failure positively predict academic procrastination. Students were found to attribute more meaning to external factors in the event of failure, and therefore were more likely to engage in procrastination. The present study indicated that the attributions of students regarding the courses they failed negatively predict procrastination at lower rates when compared to the attributional of students regarding the courses in which they succeed. At the same time, this prediction level is not significant. This result agrees with the finds of Gargari, Sabouri & Norzad (2011). Students may see their failures as uncontrollable and unchanging and therefore attribute them to external factors. In these cases, students try to explain their failure through the external environment and engage in procrastination at higher rates. At the same time, this model test found that the attributional styles of students regarding the courses they failed were not

predicted responsibility and beliefs in academic self-efficacy. According to Weiner (1994), attribution is related with self-respect and self-value. That students do not relate their attributions regarding the courses they failed with personal responsibility and self-efficacy beliefs may stem from the need to protect their self-value and self-respect.

Conclusion

The model test aiming to explain academic procrastination demonstrated that responsibility, belief in academic self-efficacy, and the attributional styles regarding success and failure predicted academic procrastination. The model test found that responsibility is the most important predictor of academic procrastination. In addition, in model test using attributional styles of students regarding the courses in which they succeeded, responsibility predicted academic self-efficacy beliefs and attributional styles regarding success. Within this context, responsibility can be said to contribute significantly to the prediction of academic procrastination through other variables. Moreover, before both model tests, given correlation values, responsibility demonstrated a relationship with the planning dimension of academic self-efficacy beliefs. The presence of a joint effect of the beliefs regarding responsibility and planning is an important factor in the prediction of academic procrastination, which is defined as the failure to fulfill academic responsibilities in due time. Within this context, future studies may benefit from the addition of a variable like "time management" to the model, and might further examine the joint effects of "responsibility," "self-efficacy beliefs regarding planning," and "time management," and how they help explain academic procrastination.

The study found that the increase of belief in academic self-efficacy is a variable that may increase academic procrastination. According to Haycock, McCarthy, and Skay (1998), when academic self-efficacy beliefs of students exceed normal values, academic procrastination behaviors increase. Unrealistically believing in academic habits may result in the misconception that all academic responsibilities can be easily overcome. Therefore, students may believe that they can easily overcome problems like studying for examinations and doing homework. The high level of of students' belief in self-efficacy may be related with variables like the need to preserve self-respect and well-being, and academic optimism. Within this context, future studies may benefit from the addition of these variables to the model to test their effect. Their results may contribute to better comprehension of the results of the present study.

Another finding of the study is that the attributions of students regarding success negatively and significantly predicted academic procrastination; however their attributions regarding failure did not predict academic procrastination. When students succeed, they perceive success as self-made, internal and controllable, and this perception decreases procrastination. When students fail, they tend to externalize the causes of failure, which increases procrastination. In addition, it was found that students diminish the degree of relationship between their attributions regarding failure and their personality and self-efficacy beliefs. The present study interpreted this state as the need to preserve internal well-being. The study used "responsibility" from the Five-factors Personality Scale in order to explain academic procrastination. The exclusion of the other four factors from the model may be a limitation in the research. Within this context, repetiting the study while including these variables and all five personality characteristics may result in more robust findings regarding how personality variables predict academic procrastination.

The research study used a model test in order to explain academic procrastination behaviors through personality traits, academic self-efficacy beliefs and attributional styles. The study results determined that academic procrastination behaviors of students can be interpreted through these variables. However, the study is limited by the research group. The repetition of the study in different universities, in different grades, in different age groups, and in different socio-economic and cultural regions can contribute to the generalization of the study and result in better comprehension of the nature of academic procrastination. The study can be supported by experimental and qualitative

studies in order to contribute to the generalization of research results. The research concluded that academic procrastination behaviors of students can be explained through personality traits, academic self-efficacy beliefs and attributional styles with a cause-and-effect relationship. According to this, avoiding external excuses may contribute to a decrease in academic procrastination among students. Hence, awareness of the scope of the aforementioned cause-and-effect relationships should be raised in students, teachers, parents and other education shareholders; shareholders should better understand the causes behind academic procrastination, as this may contribute to a decrease of incidences of academic procrastination among students. The study is limited to college students. For a better understanding of procrastination, different teaching levels and research needs to be done again. At the same time, research is directed to the disclosure of academic procrastination. For a better understanding of procrastination procrastination behaviors of college students in general should be investigated.

References

Aitken, M. E. (1982). *A personality profile of the college student procrastinator*. University of Pittsburgh: ProQuest Dissertations and Theses. Retrieved March 21, 2012 from http://search.proquest.com/docview/303242158?accountid=11054.

Akbay, E., S., ve Gizir, A., C. (2010). Cinsiyete Göre Üniversite Öğrencilerinde Akademik Erteleme Davranışı: Akademik Güdülenme, Akademik Özyeterlik ve Akademik Yükleme Stillerinin Rolü. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, *Cilt 6*, Sayı 1, Haziran 2010, ss. 60-78.

Arthur, W., & Graziano, W. (1996). The five-factor model, conscientiousness, and driving accident involvement. *Journal of Personality, 64*, 595–618.

Aydoğan, D. (2008). *Akademik Erteleme Davranışlarının Benlik Saygısı, Durumluluk Kaygı Ve Öz-Yeterlik İle Açıklanabilirliği.* Yayınlanmamış Yüksek Lisans Tezi. Ankara: Gazi Üniversitesi, Eğitim Bilimleri Enstitüsü.

Aydoğan, D. ve Özbay, Y. (2011). Akademik Erteleme Davranışının Benlik Saygısı, Durumluluk Kaygı, Öz-Yeterlilik Açısından Açıklanabilirliğinin İncelenmesi. *Pegem Eğitim ve Öğretim. Cilt 2,* Sayı 3.

Bacanlı, H., İlhan, T., & Arslan, S. (2007). *Beş Faktör Kuramına Dayalı Bir Kişilik Ölçeğinin Geliştirilmesi.* IX. Ulusal Psikolojik Danışma ve Rehberlik Kongresi. 17-19 Ekim, İzmir.

Balkıs, M. (2006). *Öğretmen Adaylarının Davranışlarındaki Erteleme Eğiliminin, Karar Verme Tarzları ile İlişkisi*. Yayınlanmamış Doktora Tezi. İzmir: Dokuz Eylül Üniversitesi, Eğitim Bilimleri Enstitüsü.

Balkıs, M. (2007). Öğretmen Adaylarının Davranışlarındaki Erteleme Eğiliminin, Karar Verme Stilleri ile İlişkisi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi. 1,* 21, 67.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Beck, B. L., Koons, S. R., & Milgrim, D. L. (2000). Correlates and consequences of behavioral procrastination: the effects of academic procrastination, self-consciousness, self-esteem and self-handicapping. Ferrari, J. R., & Pychyl, T. A. (Eds.). Procrastination: Current Issues and New Directions. [Special Issue]. *Journal of Social Behavior and Personality*, *15*, 3-13.

Burka, J. B., & Yuen, L. M. (1983). *Procrastination: Why you do it, what to do about it*. Reading, MA: Addison-Wesley.

Carden R, Bryant C., & Moss R. (2004). Locus of Control, Test anxiety, academic procrastination, and achievement among college students. *Psychol Rep 95*: 581-2.

Clark, J.L., & Hill, O.W. (1994). Academic procrastination among African-American college students. *Psychological Reports*, 75, 931-936.

Dryden, W. (2000). *Ertelemek yaşamı kaçırmaktır.* (Çev. Günhan Günay). İstanbul: Rota yayınları.

Ellis, A., & Knaus, W. J. (1977). *Overcoming procrastination.* New York: Signet Books.

Farran, B. (2004). Predictors of Academic Procrastination in College Students. *Unpublished Doctoral Dissertation.* Fordham University. ABD.

Ferrari, J. R., Johnson, J. L. and McCown, W. G. (1995). *Procrastination and task avoidance: Theory, research, and treatment.* New York : Plenum Press.

Ferrari, J., Driscoll, M., & Diaz-Morales, J. F. (2007). Examing the Self of Chronic Procrastinators: Actual, Ought and Undesired Attributes. *Personality and Individual Differences. 5(2)*, 115–123.

Haycock, L. A., McCarthy, P. & Skay, C. L. (1998). Procrastination in college students: The role of selfefficacy and anxiety. *Journal of Counseling and Development.* 76(3), 317-324.

Hill, M., Hill, D., Chabot, A., & Barral, J. (1978). A survey of college faculty and student procrastination. *College Students Personal Journal, 12*, 256-262.

Howell, A. & Watson, D. C. (2007). Procrastination: Associations with achievement goal orientation and learning strategies. *Personality and Individual Differences, 43,* 167–178

Janssen T, & Carton J. (1999). The locus of control and task difficulty on procrastination. *J Genet Psychol*; 160: 436-42.

Johnson, J. L., & Bloom, A. M. (1995). An analysis of the contribution of the five factors of personality to variance in academic procrastination. *Personality and Individual Differences*, 18, 127-133.

Kağan, M., Çakır, O., İlhan, T. & Kandemir, M. (2010). The explanation of the academic procrastination behaviour of university students with perfectionism, obsessive – compulsive and five factor personality traits. *Procedia Social and Behavioral Sciences 2*. 2121–2125

Kandemir, M. (2010). Akademik Erteleme Davranışını Açıklayıcı Bir Model. Yayınlanmamış Doktora Tezi, Gazi Üniversitesi, Ankara.

Kandemir, M. ve Özbay, Y. (2012). Akademik Özyeterlik Ölçeği (AÖYÖ): Geçerlik Güvenirlik Çalışması. *Erzincan Eğitim Fakültesi Dergisi.* Cilt 14, sayı 2, 201-214.

Karasar, N., Bilimsel Araştırma Yöntemi, Nobel Yayınları, Ankara, 2005.

Klassen, R., Krawchuk, L. & Rajani, S. (2007). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology.*

Knaus, W. J. (1998). *Do it now! Break procrastination habit (second edition).* New York: Jonn Wiley ve Sons, Inc.

Koçyiğit, M. (2011). *Üniversite Öğrencilerinin Nedensel Yüklemeleri ve Öğrenme Stilleri*. Yayınlanmamış Yüksek Lisans Tezi. Afyon Kocatepe Üniversitesi. Afyon.

Lay, C., Kovacs, A., & Danto, D. (1998). The relation of trait procrastination to the big-five factor conscientiousness: an assessment with primary-junior school children based on self-report scales. *Personality and Individual Differences* 25, 187-193.

Lee, D., Kelly, K. & Edwards, J., (2006). A closer look at the relationships among trait procrastination, neuroticism, and conscientiousness. *Personality and Individual Differences.* 40, 27–37.

McCown, W., Petzel, T., & Rupert, P. (1987). An experimental study of some hypothesized behaviors and personality variables of college student procrastinators. *Personality &Individual Differences, 8*, 781-786.

McCown, W. & Roberts, R. (1994). A study of academic and work-related dysfunctioning relevant to college version of an indirect measure of impulsive behavior. *Integra Technical Paper*. 28-94,

Milgram, N. A. (1991). Procrastination. *Encyclopedia of Human Biology. Vol. 6*, (New York, Academic Press) pp. 149-155

Moon, S., & Illingworth, A., (2005). Exploring the dynamic nature of procrastination: A latent growth curve analysis of academic procrastination. *Personality and Individual Differences. 38*, 297–309.

Onwuegbuzie, A. J. (2004) Academic Procrastination and Statistics Anxiety. *Assessment & Evaluation in Higher Education.* 29, 1, 3-19.

Özer, A. ve Altun, E. (2011). Üniversite Öğrencilerinin Akademik Erteleme Nedenleri. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi, Sayı 21,* 45 – 72

Özer, A. (2012). Procrastination: Rethinking Trait Models Erteleme: Özellik Modellerinin Gözden Geçirilmesi. *Eğitim ve Bilim.* Cilt 37, Sayı, 166. 303-317.

Pfester, T. (2002). *The Effect of Self-Monitoring on academic Procrastination, Self Eficacy and Achievement.* The Florida State University College of Education. Florida.

Piri, S., Kabakçı, E. (2007). Düşünce-Eylem Kaynaşması, Yükleme Biçimleri, Depresif ve Obsesif-Kompulsif Belirtiler Arasındaki İlişkilerin İncelenmesi. *Türk Psikiyatri Dergisi 18* (3), 197-206

Roberts, M.S. (1997). *Yaşamı ertelemeyin.* (Çev. Levent Kartal). İstanbul: Mavi okyanus yayıncılık.

Rothblum, E. D., Solomon, L. J. & Murakami, J. (1986). Affective, cognitive, and behavioral differences between high and low procrastinators. *Journal of Counseling Psychology, 33*, 387-394.

Şimşek, Ö.F. (2007). *Yapısal Eşitlik Modellemesine Giriş* (Temel İlkeler ve LISREL Uygulamaları), ISBN: 9944-495-07-7, s. 224, Ekinoks, Ankara.

Sirois, F. (2004). Procrastination and intentions to perform health behaviors: The role of self-efficacy and the consideration of future consequences. *Personality and Individual Differences. 37*, 115–128.

Yapıcı, Ş., ve Yapıcı, M. (2010). *Eğitim Psikolojisi* (2. Baskı). Ankara: Anı Yayıncılık.

Watson, D. C. (2001). Procrastination and the Five-Factor Model: A Facet Level Analysis. *Personality and Individual Differences 30 (1)* 149-158.

Weiner B.(1994). *Integrating social and personal theories of achievement striving*. Rev Educ Res. 64: 557-74.

Weiner, B. (2000). Attributional Thoughts about Consumer Behavior. *The Journal of Consumer Research 27* (3), 382-387.